		Future Flight De	
	200	6 Science Revised J	
	-	State Curricul	um
Maryland Science I	Revised Januar	y 2008	
Grade 5			
Activity/Lesson	State	Standards	
			Make use of and analyze models, such as
Air Transportation			tables and graphs to summarize and
Problem	MD	SCI.5.1.C.1.a	interpret data.
			Submit work to the critique of others which
			involves discussing findings, posing
Air Transportation			questions, and challenging statements to
Problem	MD	SCI.5.1.C.1.c	clarify ideas.
Air Transportation			Construct and share reasonable
Problem	MD	SCI.5.1.C.1.d	explanations for questions asked.
			Identify factors that must be considered in
			any technological design—cost, safety,
Air Transportation			environmental impact, and what will happen
Problem	MD	SCI.5.1.D1.A.c	if the solution fails.
			Realize that there is no perfect design and
			that usually some features have to be
			sacrificed to get others, for example, designs
			that are best in one respect (safety or ease
Aircraft Design			of use) may be inferior in other ways (cost or
Problem	MD	SCI.5.1.D1.A.b	, , ,
			Identify factors that must be considered in
			any technological design—cost, safety,
Aircraft Design			environmental impact, and what will happen
Problem	MD	SCI.5.1.D1.A.c	if the solution fails.
			Realize that in something that consists of
Aircraft Design			many parts, the parts usually influence one
Problem	MD	SCI.5.1.D1.B.a	
			Observe and explain the changes in selected
Aircraft Design			motion patterns using the relationship
Problem	MD	SCI.5.5.A.2.b	between force and mass.
		Future Flight De	
	200	6 Science Revised J	
		State Curricul	um
Maryland Science I	Revised Januai	y 2008	
Grade 6			
Activity/Lesson	State	Standards	
Air Transportation		2010111	Use mathematics to interpret and
Problem	MD	SCI.6.1.A.1.h	communicate data.
			Verify the idea that there is no fixed set of
			steps all scientists follow, scientific
			investigations usually involve the collection of
			relevant evidence, the use of logical
			reasoning, and the application of imagination
Air Transportation			in devising hypotheses and explanations to
Problem	MD	SCI.6.1.B.1.a	make sense of the collected evidence.

			Participate in group discussions on scientific
			topics by restating or summarizing accurately
			what others have said, asking for clarification
Air Transportation			or elaboration, and expressing alternative
Problem	MD	SCI.6.1.C.1.f	positions.
1 TODICITI	IVID	001.0.1.0.1.1	Analyze data gathered and formulate a
Air Transportation			conclusion on the effects of temperature
Problem	MD	SCI.6.4.C.1.c	change on most substances.
Aircraft Design	IVID	001.0.4.0.1.0	Demonstrate that all control systems have
Problem	MD	SCI 6 1 D1 A b	inputs, outputs, and feedback.
1 10010111	i i i i i i i i i i i i i i i i i i i	001.0.1.01.70	Identify reasons that systems fail—they have
			faulty or poorly matched parts, are used in
			ways that exceed what was intended by the
Aircraft Design			design, or were poorly designed to begin
Problem	MD	SCI.6.1.D1.A.d	
Aircraft Design	IVID	001.0.1.01.74.0	Provide evidence that a system can include
Problem	MD	SCI 6 1 D1 B a	processes as well as things.
1 10010111	IVID .	001.0.1.01.0.0	proceeds do wen do timigo.
			Analyze any system to determine its
			connection, both internally and externally to
			other systems and explain that a system may
Aircraft Design			be thought of as containing subsystems and
Problem	MD	SCI.6.1.D1.B.c	as being a subsystem of a larger system.
		⊥ Future Flight De	l esign
		│ Future Flight De ience Revised J	
			anuary 2008
		ience Revised J State Curricul	anuary 2008
Maryland Science	2006 Sc	ience Revised J State Curricul	anuary 2008
Grade 7 Activity/Lesson	2006 Sc	ience Revised J State Curricul	anuary 2008 um
Grade 7 Activity/Lesson Air Transportation	2006 Sc Revised January 20 State	ience Revised J State Curricul 08 Standards	Use mathematics to interpret and
Grade 7 Activity/Lesson	2006 Sc Revised January 20	ience Revised J State Curricul 08	anuary 2008 um
Grade 7 Activity/Lesson Air Transportation	2006 Sc Revised January 20 State	ience Revised J State Curricul 08 Standards	Use mathematics to interpret and communicate data.
Grade 7 Activity/Lesson Air Transportation	2006 Sc Revised January 20 State	ience Revised J State Curricul 08 Standards	Use mathematics to interpret and communicate data. Verify the idea that there is no fixed set of
Grade 7 Activity/Lesson Air Transportation	2006 Sc Revised January 20 State	ience Revised J State Curricul 08 Standards	Use mathematics to interpret and communicate data. Verify the idea that there is no fixed set of steps all scientists follow, scientific
Grade 7 Activity/Lesson Air Transportation	2006 Sc Revised January 20 State	ience Revised J State Curricul 08 Standards	Use mathematics to interpret and communicate data. Verify the idea that there is no fixed set of steps all scientists follow, scientific investigations usually involve the collection of
Grade 7 Activity/Lesson Air Transportation	2006 Sc Revised January 20 State	ience Revised J State Curricul 08 Standards	Use mathematics to interpret and communicate data. Verify the idea that there is no fixed set of steps all scientists follow, scientific investigations usually involve the collection of relevant evidence, the use of logical
Grade 7 Activity/Lesson Air Transportation Problem	2006 Sc Revised January 20 State	ience Revised J State Curricul 08 Standards	Use mathematics to interpret and communicate data. Verify the idea that there is no fixed set of steps all scientists follow, scientific investigations usually involve the collection of relevant evidence, the use of logical reasoning, and the application of imagination
Grade 7 Activity/Lesson Air Transportation Problem Air Transportation	2006 Sc Revised January 20 State	ience Revised J State Curricul 08 Standards SCI.7.1.A.1.h	Use mathematics to interpret and communicate data. Verify the idea that there is no fixed set of steps all scientists follow, scientific investigations usually involve the collection of relevant evidence, the use of logical reasoning, and the application of imagination in devising hypotheses and explanations to
Grade 7 Activity/Lesson Air Transportation Problem	2006 Sc Revised January 20 State	ience Revised J State Curricul 08 Standards	Use mathematics to interpret and communicate data. Verify the idea that there is no fixed set of steps all scientists follow, scientific investigations usually involve the collection of relevant evidence, the use of logical reasoning, and the application of imagination in devising hypotheses and explanations to make sense of the collected evidence.
Grade 7 Activity/Lesson Air Transportation Problem Air Transportation	2006 Sc Revised January 20 State	ience Revised J State Curricul 08 Standards SCI.7.1.A.1.h	Use mathematics to interpret and communicate data. Verify the idea that there is no fixed set of steps all scientists follow, scientific investigations usually involve the collection of relevant evidence, the use of logical reasoning, and the application of imagination in devising hypotheses and explanations to make sense of the collected evidence. Participate in group discussions on scientific
Grade 7 Activity/Lesson Air Transportation Problem Air Transportation	2006 Sc Revised January 20 State	ience Revised J State Curricul 08 Standards SCI.7.1.A.1.h	Use mathematics to interpret and communicate data. Verify the idea that there is no fixed set of steps all scientists follow, scientific investigations usually involve the collection of relevant evidence, the use of logical reasoning, and the application of imagination in devising hypotheses and explanations to make sense of the collected evidence. Participate in group discussions on scientific topics by restating or summarizing accurately
Grade 7 Activity/Lesson Air Transportation Problem Air Transportation Problem	2006 Sc Revised January 20 State	ience Revised J State Curricul 08 Standards SCI.7.1.A.1.h	Use mathematics to interpret and communicate data. Verify the idea that there is no fixed set of steps all scientists follow, scientific investigations usually involve the collection of relevant evidence, the use of logical reasoning, and the application of imagination in devising hypotheses and explanations to make sense of the collected evidence. Participate in group discussions on scientific topics by restating or summarizing accurately what others have said, asking for clarification
Air Transportation Problem Air Transportation Problem Air Transportation Problem	State MD MD	State Curricul Standards SCI.7.1.A.1.h SCI.7.1.B.1.a	Use mathematics to interpret and communicate data. Verify the idea that there is no fixed set of steps all scientists follow, scientific investigations usually involve the collection of relevant evidence, the use of logical reasoning, and the application of imagination in devising hypotheses and explanations to make sense of the collected evidence. Participate in group discussions on scientific topics by restating or summarizing accurately what others have said, asking for clarification or elaboration, and expressing alternative
Air Transportation Problem Air Transportation Problem Air Transportation Problem	2006 Sc Revised January 20 State	ience Revised J State Curricul 08 Standards SCI.7.1.A.1.h	um Use mathematics to interpret and communicate data. Verify the idea that there is no fixed set of steps all scientists follow, scientific investigations usually involve the collection of relevant evidence, the use of logical reasoning, and the application of imagination in devising hypotheses and explanations to make sense of the collected evidence. Participate in group discussions on scientific topics by restating or summarizing accurately what others have said, asking for clarification or elaboration, and expressing alternative positions.
Air Transportation Problem Air Transportation Problem Air Transportation Problem	State MD MD	State Curricul State Curricul Standards SCI.7.1.A.1.h SCI.7.1.B.1.a	Use mathematics to interpret and communicate data. Verify the idea that there is no fixed set of steps all scientists follow, scientific investigations usually involve the collection of relevant evidence, the use of logical reasoning, and the application of imagination in devising hypotheses and explanations to make sense of the collected evidence. Participate in group discussions on scientific topics by restating or summarizing accurately what others have said, asking for clarification or elaboration, and expressing alternative

			Realize that design usually requires taking constraints into account. (Some constraints,			
			· ·			
			such as gravity or the properties of the			
			materials to be used, are unavoidable. Other			
			constraints, including economic, political,			
Aircraft Design			social, ethical, and aesthetic ones also limit			
Problem	MD	SCI.7.1.D1.A.c	,			
			Identify reasons that systems fail—they have			
			faulty or poorly matched parts, are used in			
			ways that exceed what was intended by the			
Aircraft Design			design, or were poorly designed to begin			
Problem	MD	SCI.7.1.D1.A.d	with.			
			Analyze any system to determine its			
			connection, both internally and externally to			
			other systems and explain that a system may			
Aircraft Dooign			be thought of as containing subsystems and			
Aircraft Design Problem	MD	CCL 7 1 D1 D a	•			
Problem	INID	3CI.7.1.D1.B.C	as being a subsystem of a larger system.			
		⊥ Future Flight De	esign			
2006 Science Revised January 2008						
	_	State Curricul	um			
	Revised January 20	08				
Grade 8	0	0, 1				
Activity/Lesson	State	Standards				
Air Transportation			Use mathematics to interpret and			
Problem	MD	SCI.8.1.A.1.h	communicate data.			
			Verify the idea that there is no fixed set of			
			steps all scientists follow, scientific			
			investigations usually involve the collection of			
			relevant evidence, the use of logical			
			reasoning, and the application of imagination			
Air Transportation			in devising hypotheses and explanations to			
Air Transportation	MD	CCI 0 4 D 4 o	make sense of the collected evidence.			
Problem	MD	SCI.8.1.B.1.a				
			Participate in group discussions on scientific			
			topics by restating or summarizing accurately			
Air Transcratetia			what others have said, asking for clarification			
Air Transportation	MD	00104046	or elaboration, and expressing alternative			
Problem	MD	SCI.8.1.C.1.f	positions.			
Aircraft Design		1	Demonstrate that all control systems have			
	MD	00104544	•			
Problem	MD	SCI.8.1.D1.A.b	inputs, outputs, and feedback.			
Problem	MD	SCI.8.1.D1.A.b	inputs, outputs, and feedback. Realize that design usually requires taking			
Problem	MD	SCI.8.1.D1.A.b	inputs, outputs, and feedback. Realize that design usually requires taking constraints into account. (Some constraints,			
Problem	MD	SCI.8.1.D1.A.b	inputs, outputs, and feedback. Realize that design usually requires taking constraints into account. (Some constraints, such as gravity or the properties of the			
Problem	MD	SCI.8.1.D1.A.b	inputs, outputs, and feedback. Realize that design usually requires taking constraints into account. (Some constraints, such as gravity or the properties of the materials to be used, are unavoidable. Other			
	MD	SCI.8.1.D1.A.b	inputs, outputs, and feedback. Realize that design usually requires taking constraints into account. (Some constraints, such as gravity or the properties of the materials to be used, are unavoidable. Other constraints, including economic, political,			
Aircraft Design	MD	SCI.8.1.D1.A.b	inputs, outputs, and feedback. Realize that design usually requires taking constraints into account. (Some constraints, such as gravity or the properties of the materials to be used, are unavoidable. Other constraints, including economic, political, social, ethical, and aesthetic ones also limit			

			Identify reasons that systems fail—they have
			faulty or poorly matched parts, are used in
			ways that exceed what was intended by the
Aircraft Design			design, or were poorly designed to begin
Problem	MD	SCI.8.1.D1.A.d	with.
			Demonstrate and explain, through a variety
			of examples, that moving objects will stay in
			motion at the same speed and in the same
Aircraft Design			direction unless acted on by an unbalanced
Problem	MD	SCI.8.5.A.2.b	force.
			Investigate and collect data from multiple
			trials, about the motion that explain the
			motion that results when the same force acts
			on objects of different mass; and when
Aircraft Design			different amounts of force act on objects of
Problem	MD	SCI.8.5.A.2.c	the same mass.